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| APPLICATION NO. | FILING DATE | FIRST NAMED INVENTOR | ATTORNEY DOCKET NO. | CONFIRMATION NO. |
|--|-------------|----------------------|---------------------|------------------|
| 10/626,916 | 07/25/2003 | David Wei Wang | 68.0345 | 2409 |
| 35204 | 7590 | 08/23/2005 | EXAMINER | |
| SCHLUMBERGER RESERVOIR COMPLETIONS 14910 AIRLINE ROAD ROSHARON, TX 77583 | | | HOUSE, LETORIA G | |
| | | | ART UNIT | PAPER NUMBER |

DATE MAILED: 08/23/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

| | | | |
|------------------------------|--------------------------------------|------------------------------------|--|
| Office Action Summary | Application No. 10/626,916 | Applicant(s) WANG ET AL. | |
| | Examiner Letoria House | Art Unit 3672 | |

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on ____.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☐ Claim(s) ____ is/are pending in the application.
4a) Of the above claim(s) ____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) ____ is/are allowed.
- 6) ☒ Claim(s) 1-13 and 21 is/are rejected.
- 7) ☐ Claim(s) ____ is/are objected to.
- 8) ☒ Claim(s) 14-20 are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on ____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. ____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) Paper No(s)/Mail Date. ____. |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date ____. | 6) <input type="checkbox"/> Other: ____. |

DETAILED ACTION

Claim Rejections - 35 USC § 112

The following is a quotation of the first paragraph of 35 U.S.C. 112:

The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

1. Claims 1-13 are rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the written description requirement. The claim(s) contains subject matter which was not described in the specification in such a way as to reasonably convey to one skilled in the relevant art that the inventor(s), at the time the application was filed, had possession of the claimed invention. Claim 1 has been amended to include the process limitation of interlocking layers of mesh material by pressing one interlocking layer into a next interlocking layer. The specification is silent as to this process step, thus it is considered new matter.

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

2. Claims 1-7 and 12-13 are rejected under 35 U.S.C. 102(b) as being anticipated by Whitlock et al. (U.S. 6,006,829).

Whitlock et al. discloses a mesh screen apparatus comprising:

- A mesh medium having interlocking layers of mesh material (23) a base pipe (10) having openings (12) in its sidewall and onto which the mesh medium is mounted such that the mesh medium covers the openings. (Figures 1, 2, and 3).
With regard to claim 1, note the process limitation of connecting adjacent layers by pressing in given little patentable weight in this product claim as long as Whitlock et al's end product mesh screen is the same.
- The mesh material comprising fiber strands, the fiber strands arranged in orthogonal layers, where the fiber strands are metallic. (Figures 1, 2, and 3; column 6 lines 43-52). The Examiner defines orthogonal arrangement to mean intersecting at right angles. (See Merriam-Webster's Collegiate Dictionary, Tenth ed. 1993).
- A tubular mesh medium, the mesh screen apparatus having a seamless tubular mesh medium. (Figures 1, 2, and 3; column 5 lines 5-14).
- The mesh screen apparatus in which the mesh medium has a porosity (Column 6 lines 31-36), standard mesh incorporated as one of the layers (Item 23 of Figures 2 and 3), and the mesh medium covers only a portion of the base pipe (Figures 1, 2, and 3).
- A mesh medium having interlocking layers of mesh material; and a piece of equipment which the mesh medium at least partially encloses such that the mesh medium prevents infiltration of particulates into the equipment (Figures 1, 2, and 3).

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

The factual inquiries set forth in *Graham v. John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.
4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

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3. Claims 8-11 are rejected under 35 U.S.C. 103(a) as being unpatentable over Whitlock et al. (U.S. 6,006,829) in view of Schulte (U.S. 6,237,780).

Whitlock et al. discloses an apparatus as states above. However, the reference fails to teach the mesh screen apparatus in which the mesh material comprises fiber strands and the porosity is determined by the thickness of the fiber strands, the mesh material having strands of variable diameter and the porosity is variable across the mesh medium, and the mesh material comprises fiber strands and the porosity is determined by the diameter and number of openings in the mesh medium.

Schulte teaches a mesh screen apparatus that includes a screen where the mesh material comprises fiber strands and the porosity is determined by the thickness of the fiber strands, the mesh material having strands of variable diameter and the porosity is variable across the mesh medium, and the mesh material comprises fiber strands and the porosity is determined by the diameter and number of openings in the mesh medium (Figure 15) for the purpose of attaining finer particle separation to increase the percentage of impurities removed from the screened fluid.

It would have been obvious to one of ordinary skill in the art at the time of the invention to have provided a the screen of Whitlock et al. with the fiber strands of variable diameter and thickness of Schulte to improve particle separation and reduce the need to frequently clean the screen, thereby maintaining the desired flow rate.

4. Claim 21 is rejected under 35 U.S.C. 103(a) as being unpatentable over Whitlock et al. (U.S. 6,006,829) in view of Bayne et al. (U.S. 2002/0007948). Whitlock et al.

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discloses an apparatus as applied to claims 1-7 and 12-13 above. However, the reference fails to teach the apparatus having at least one intelligent completion device, which is at least partially enclosed by the mesh medium. Bayne et al. discloses a composite member having a fiber optic line embedded therein (paragraphs 0032 and 0036). Bayne et al. suggest that the use of fiber optics embedded in gravel pack screens is useful in order to obtain real time data on the well during production. Therefore, it would have been obvious to one skilled in the art at the time of the invention to modify the apparatus of Whitlock et al. to include the intelligent system of Bayne et al. in order to monitor downhole parameters during well production.

Response to Arguments

5. Applicant's arguments filed July 05, 2005 have been fully considered but they are not persuasive. The applicant has amended the claim to include a product by process limitation. Product by process claims are not limited to the manipulations of the recited steps, only the structure implied by the steps. Determination of patentability of the product is not dependent on the method of production, it is based on the product itself. Therefore no weight is given to the process of pressing the interlocking layers of the apparatus into one another because the same product of the original claim results.

Response to Amendment

Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP

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§ 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

6. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. The following references disclose well screens comprising intelligent devices: Whitlock (U.S. 6,382,318); Morvant et al. (2003/0173075); Restarick et al. (U.S. 6,684,951); Fisher et al. (U.S. 6,554,065); Ross (U.S. 6,065,535); and Quigley et al. (U.S. 6,004,639).

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Letoria House whose telephone number is (571) 272-8118. The examiner can normally be reached on M-F, 7:00 A.M. - 4:00 P.M.

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If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, David Bagnell can be reached on (571) 272-6999. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).


David Bagnell
Supervisory Patent Examiner
Art Unit 3672

LGH